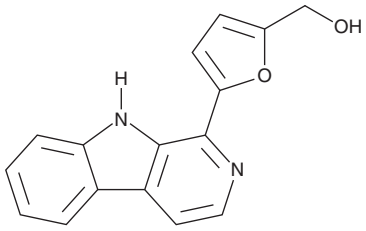
PRODUCT INFORMATION

Perlolyrine

Item No. 46437

CAS Registry No.: 29700-20-7
Formal Name: 5-(9H-pyrido[3,4-b]indol-1-yl)-2-furanmethanol
Synonyms: Perlolyrin, Tribulusterine, Substance YS
MF: $C_{16}H_{12}N_2O_2$
FW: 264.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Perlolyrine is supplied as a solid. A stock solution may be made by dissolving the perlolyrine in the solvent of choice, which should be purged with an inert gas. Perlolyrine is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Description

Perlolyrine is a β-carboline alkaloid originally isolated from *L. perenne* and has anti-inflammatory activity.[1,2] It inhibits LPS-induced toll-like receptor 4 (TLR4) activation and IFN signaling in THP-1 monocytes at 100 µM.[2] Intravaginal application of perlolyrine (100 µM) reduces vaginal inflammation and increases survival time but does not reduce vaginal viral titers in a mouse model of genital herpes. Perlolyrine is also formed from L-tryptophan (Item No. 29600) and monosaccharides when heated in acidic conditions and has been found in foods such as tomato juice and puree, miso, and soy sauce.[3,4]

References

1. Jeffreys, J.A.D. The alkaloids of perennial rye-grass (*Lolium perenne* L.). Part IV. Isolation of a new base, perlolyrine; the crystal structure of its hydrobromide dihydrate, and the synthesis of the base. *J. Chem. Soc. C Org.* 1091-1103 (1970).
2. Glick, V.J., Webber, C.A., Simmons, L.E., *et al.* Vaginal lactobacilli produce anti-inflammatory β-carboline compounds. *Cell Host Microbe* **32(11),** 1897-1909 (2024).
3. Herraiz, T., Peña, A., and Salgado, A. Identification, formation, and occurrence of perlolyrine: A β-carboline alkaloid with a furan moiety in foods. *J. Agric. Food Chem.* **71(36),** 13451-13461 (2023).
4. Chen, H.-S., Chiu, P.-C., Tsai, Y.-C., *et al.* Perlolyrine formation and isoflavones hydrolysis during miso fermentation affected by tryptophan and tryptamine. *J. Food Sci.* **91(9),** e71364 (2026).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM